AMENDMENTS TO THE CLAIMS

The following listing of claims replaces all prior listings of claims:

Listing of Claims:

1-13. (Canceled)

14. (Currently Amended) A method ~~for communicating between a central message exchange server and one or more heterogeneous external data sources,~~ comprising:

receiving, ~~data~~ at an ~~the central message~~ exchange ~~server~~ infrastructure implemented on one or more processors, data from a ~~the one or more~~ heterogeneous external data source implemented on one or more other machines ~~sources~~, the data comprising a data format that is native to the heterogeneous external data source and not compliant with any of one or more extensible markup language protocols used by an integration ~~the central message exchange~~ server of the exchange infrastructure;

instantiating, by the integration server on the one or more processors, an inbound adapter based on the data format used by the ~~one or more~~ heterogeneous external data sources~~,~~;

~~the inbound adapter~~ generating, at the inbound adapter, a message that conforms to at least one of the one or more extensible markup language protocols used by the ~~central message exchange~~ integration server, the message comprising at least part of the data received at the exchange infrastructure;~~,~~

~~the inbound adapter~~ persisting, at the inbound adapter, a message identifier that identifies ~~designating~~ the message~~, the persisted message identifier being used~~ for re-sending of the message in case ~~of~~ delivery ~~failure~~ of the message to the integration server fails;

passing, through the inbound adapter, the message to the ~~central message exchange~~ integration server~~ through the inbound adapter; and~~

receiving, at the inbound adapter from the integration server, a confirmation acknowledgement confirming receipt of the message by the integration server; and

processing, at the inbound adapter, ~~a~~ the confirmation acknowledgment ~~upon receipt of the message by the central message exchange server~~ to prevent the message from being resent.

15. (Currently Amended) The method in accordance with claim 14, wherein ~~the adapter is an inbound adapter, and wherein~~ the message generated by the inbound adapter is an XML message.

16. (Currently Amended) The method in accordance with claim 14, further comprising:

~~passing an outbound message from the central message exchange server to the one or more heterogeneous external data sources, the outbound message conforming to the one or more extensible markup language protocols used by the central message server;~~

instantiating, at the one or more processors, an outbound adapter based on the data format used by the ~~one or more~~ heterogeneous external data source~~s,~~;

converting, by the outbound adapter, an ~~converting the~~ outbound message from the integration server to the heterogeneous external data source, the converting comprising converting the outbound message from one of the one or more extensible markup language protocols used by the integration server to the data format that is native to the heterogeneous external data source; and

sending the outbound message from the outbound adapter to the ~~one or more~~ heterogeneous external data source~~s~~.

17-22. (Canceled)

23. (New) The method in accordance with claim 16, wherein the outbound message from the integration server is an XML message.

24. (New) The method in accordance with claim 14, wherein the heterogeneous external data source and the exchange infrastructure communicate via a hypertext transport protocol (HTTP).

25. (New) The method in accordance with claim 14, wherein the exchange infrastructure operates using a simple object access protocol (SOAP).

26. (New) The method in accordance with claim 14, wherein the heterogeneous external data source includes a sending application.

27. (New) The method in accordance with claim 14, further comprising:

monitoring operation of each inbound adapter and presenting monitoring information to a graphic user interface (GUI), by an adapter monitor.

28. (New) The method in accordance with claim 27, further comprising:

generating the GUI and displaying the monitoring information, by a GUI engine.

29. (New) The method in accordance with claim 27, further comprising:

logging the monitoring information by an information log.

30. (New) The method in accordance with claim 27, further comprising:

logging message identifiers of messages communicated through the inbound adapter by an identification log.

31. (New) The method in accordance with claim 14, further comprising:

receiving, at the exchange infrastructure, second data from a second heterogeneous external data source, the second data comprising a second data format that is native to the second heterogeneous external data source and not compliant with any of the one or more extensible markup language protocols used by the integration server;

instantiating, by the integration server on the one or more processors, a second inbound adapter based on the second data format used by the second heterogeneous external data source;

generating, at the second inbound adapter, a second message that conforms to at least one of the one or more extensible markup language protocols used by the integration server, the second message comprising at least part of the second data received at the exchange infrastructure;

persisting, at the second inbound adapter, a second message identifier that identifies the second message for re-sending of the second message in case delivery of the second message to the integration server fails;

passing, through the second inbound adapter, the second message to the integration server;

receiving, at the second inbound adapter from the integration server, a second confirmation acknowledgement confirming receipt of the second message by the integration server; and

processing, at the second inbound adapter, the second confirmation acknowledgment to prevent the second message from being resent.

32. (New) The method in accordance with claim 14, wherein the heterogeneous external data source communicates with the exchange infrastructure through a firewall.

33. (New) The method in accordance with claim 14, further comprising:

registering, at a system landscape directory of the exchange infrastructure, an installation of the external heterogeneous data source for collaboration with the exchange infrastructure, the system landscape directory comprising a system landscape that describes internal and external components that are installed and available on certain machines that collaborate via the exchange infrastructure, the external components comprising the external heterogeneous data source;

accessing, by an integration repository of the exchange infrastructure from the system landscape directory, a design-time description of the external heterogeneous data source;

capturing, by an integration directory of the exchange infrastructure at runtime, a configuration-specific collaboration description of the external heterogeneous data source, the configuration-specific collaboration description comprising mappings and routing rules for processing messaging from the external heterogeneous data source; and

retrieving, by the integration server from the integration directory, the configuration-specific collaboration description for the external heterogeneous data source for use in instantiating the inbound adapter.

34. (New) A system comprising:

at least one processor; and

at least one memory storing instructions that cause the at least one processor to perform operations comprising:

receiving, at an exchange infrastructure implemented on the at least one processor, data from a heterogeneous external data source implemented on one or more other machines, the data comprising a data format that is native to the heterogeneous external data source and not compliant with any of one or more extensible markup language protocols used by an integration server of the exchange infrastructure;

instantiating, by the integration server on the at least one processor, an inbound adapter based on the data format used by the heterogeneous external data source;

generating, at the inbound adapter, a message that conforms to at least one of the one or more extensible markup language protocols used by the integration server, the message comprising at least part of the data received at the exchange infrastructure;

persisting, at the inbound adapter, a message identifier that identifies the message for re-sending of the message in case delivery of the message to the integration server fails;

passing, through the inbound adapter, the message to the integration server;

receiving, at the inbound adapter from the integration server, a confirmation acknowledgement confirming receipt of the message by the integration server; and

processing, at the inbound adapter, the confirmation acknowledgment to prevent the message from being resent.

35. (New) An article comprising a machine-readable medium configured to provide instructions to at least one programmable processor, the instructions causing the programmable processor to perform operations comprising:

receiving, at an exchange infrastructure implemented on the programmable processor, data from a heterogeneous external data source implemented on one or more other machines, the data comprising a data format that is native to the heterogeneous external data source and not compliant with any of one or more extensible markup language protocols used by an integration server of the exchange infrastructure;

instantiating, by the integration server on the programmable processor, an inbound adapter based on the data format used by the heterogeneous external data source;

generating, at the inbound adapter, a message that conforms to at least one of the one or more extensible markup language protocols used by the integration server, the message comprising at least part of the data received at the exchange infrastructure;

persisting, at the inbound adapter, a message identifier that identifies the message for re-sending of the message in case delivery of the message to the integration server fails;

passing, through the inbound adapter, the message to the integration server;

receiving, at the inbound adapter from the integration server, a confirmation acknowledgement confirming receipt of the message by the integration server; and

processing, at the inbound adapter, the confirmation acknowledgment to prevent the message from being resent.